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REPORT TO THE CONGRESS

72-0307

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Examination Of Financial Statements Of The Tennessee Valley Authority For Fiscal Year 1971

B-114850

BY THE COMPTROLLER GENERAL
OF THE UNITED STATES

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FEB. 1, 1972



COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-114850

To the President of the Senate and the
Speaker of the House of Representatives

This is our report on the examination of the financial statements of the Tennessee Valley Authority for fiscal year 1971, which was made pursuant to the Government Corporation Control Act (31 U.S.C. 851). We have included as an appendix to this report a description of TVA's retirement system together with financial statements and the certified public accounting firm's opinion thereon.

Copies of this report are being sent to the Director, Office of Management and Budget; the Secretary of the Treasury; and the Chairman of the Board of Directors of the Tennessee Valley Authority.

Comptroller General
of the United States

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ABBREVIATIONS

TVA	Tennessee Valley Authority
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D I G E S T

WHY THE EXAMINATION WAS MADE

The Government Corporation Control Act (31 U.S.C. 851) requires the Comptroller General to audit the Tennessee Valley Authority annually.

OPINION OF FINANCIAL STATEMENTS

In the opinion of the General Accounting Office, the Authority's financial statements present fairly its financial position at June 30, 1971, and the results of its operations and the source and disposition of its funds for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year and with applicable Federal laws. (See p. 12.)

OTHER MATTERS OF INTEREST

The net income from power operations in fiscal year 1971 was \$119 million, \$44.4 million more than in fiscal year 1970. (See p. 4.) This increase resulted principally from the substantially greater revenues realized primarily by rate increases. (See p. 5.)

Of the \$119 million, \$85.1 million was paid into the U.S. Treasury--\$65.1 million as a return on the Government's investment in power facilities and \$20 million as partial repayment of the Government's appropriation (as required by law). The remaining \$33.9 million increased proprietary capital. (See p. 7.)

On October 14, 1970, Public Law 91-446 was enacted and increased the amount of bonds, notes, and other long-term debts which the Authority may have outstanding at any one time from \$1.75 billion to \$5 billion. (See p. 8.)

During fiscal year 1971 the Authority was prohibited from issuing bonds on a parity with those outstanding because income for the preceding 5 years did not meet the required amount. As a result the Authority issued only short-term securities. Short-term notes outstanding at June 30, 1971, were \$359.3 million more than those at the end of the previous year. Such bonds may be issued again during fiscal year 1972. (See p. 8.)

The Authority expects to begin operation of the Browns Ferry Nuclear Plant, its first such plant, in the fall of 1972 although originally scheduled for operation in October 1970. Other nuclear plants are scheduled to begin operation in 1974 and 1976, respectively. An additional nuclear plant is planned, but the site has yet to be determined. (See p. 9.)

According to the Authority, construction of the Cumberland Steam Plant is on schedule and the plant is expected to be in operation in the summer of 1972. (See p. 10.)

Construction of facilities to help meet peak power demands and emergency conditions continued during the year. During 1971, 16 gas turbines were placed in operation, and 12 additional turbines were scheduled for operation in 1972. The Authority also is constructing new hydro facilities and is continuing to install transmission lines. (See p. 10.)

RECOMMENDATIONS OR SUGGESTIONS

This report contains no recommendations or suggestions.

MATTERS FOR CONSIDERATION BY THE CONGRESS

This report, required by law, informs the Congress of the operations and financial conditions of the Authority.

CHAPTER 1

INTRODUCTION

The Tennessee Valley Authority (TVA) is an independent Government corporation created by the Tennessee Valley Authority Act of May 18, 1933 (48 Stat. 58; 16 U.S.C. 831), to provide generally for the unified development of the Tennessee River system and to assist in the development of other resources in the Tennessee Valley and adjoining areas. The functions of TVA include an electric power program and non-power programs, such as flood control, navigation, and fertilizer and munitions development.

TVA activities are directed by its three-member Board of Directors. Members of the Board are appointed by the President, with the advice and consent of the Senate, to serve 9-year overlapping terms of office. The President designates one member as Chairman.

Board members at June 30, 1971, and the expiration dates of their terms are:

Aubrey J. Wagner, Chairman	May 18, 1978
Frank E. Smith, Director	May 18, 1972
Don McBride, Director	May 18, 1975

Mr. Lynn Seeber, TVA's General Manager, is responsible to the Board for carrying out its policies, decisions, and programs.

Additional information on the activities of TVA can be found in its annual report to the President and to the Congress, which is issued pursuant to the TVA Act.

CHAPTER 2

GENERAL COMMENTS

POWER OPERATIONS

TVA supplies power, at wholesale, to 160 municipal and cooperative electric systems which distribute power to more than two million customers in parts of seven States. Power also is sold directly to 46 industrial power consumers having large or unusual power requirements and to several Federal atomic, aerospace, and military installations.

Section 14 of the TVA Act requires that accounts of specified power activities be kept in accordance with the uniform system of accounting prescribed for electric utilities by the Federal Power Commission. Operating results of the power program for fiscal year 1971 are shown in exhibit II of the financial statements. The results are summarized and compared with those of fiscal year 1970, as follows:

	<u>1971</u>	<u>1970</u>	<u>Percent</u>
	(000 omitted)		<u>increase</u>
Operating revenues:			
Sales of electric energy	\$579,322	\$461,478	25
Rents	<u>18,713</u>	<u>18,138</u>	3
Total operating revenues	598,035	479,616	25
Operating expenses	<u>449,526</u>	<u>374,215</u>	20
Operating income	148,509	105,401	41
Other income and deductions	<u>48,160^a</u>	<u>31,567^a</u>	52
Total income	196,669	136,968	43
Interest charges	<u>77,665</u>	<u>62,351</u>	24
Net income	119,004	74,617	59
Payment of return on appropriation investment	<u>65,147</u>	<u>57,649</u>	13
Increase in retained earnings	<u>\$ 53,857</u>	<u>\$ 16,968</u>	217

^aInterest income and interest capitalized on construction and nuclear fuel costs.

Substantially greater revenues were realized in fiscal year 1971 than in fiscal year 1970, primarily as a result of fiscal year 1971 rate increases. Operating expenses and interest charges also increased, but TVA indicated that these costs were less than anticipated.

RATE INCREASES

The act requires that TVA sell power at rates as low as feasible and yet adequate to maintain the financial soundness of the power program. During fiscal year 1970 operating expenses and interest charges increased over comparable fiscal year 1969 amounts by 13 and 35 percent, respectively. Therefore, early in fiscal year 1971, TVA increased its power rates.

The power rate increases were effective in two increments--on August 1 and October 2, 1970. The August increase was based on existing rate schedules which provided that higher rates be effective automatically on August 1, 1970, in response to rises in the cost of fuel and money.

Because the August automatic increase in power rates failed to provide revenues sufficient to cover the rapid increases in operating costs, it was supplemented by a substantial increase in rates in October to obtain the additional revenues needed to meet rising costs. TVA and the distributors agreed at that time to substitute a new procedure for the automatic annual rate adjustment.

Under the new procedure TVA's current and prospective power revenues and expenses are reviewed during each 3-month period by TVA and a committee representing the distributors. The TVA Board then determines whether a rate adjustment--upward or downward--will be needed. For the last three quarters in fiscal year 1971 and for the first quarter in fiscal year 1972, no changes in rates were made.

PROPRIETARY CAPITAL AND PAYMENTS TO
TREASURY OF THE UNITED STATES

From the inception of TVA in 1933 to June 30, 1971, the United States made available to TVA \$2,624 million in proprietary capital through appropriations, bond purchases, and property transfers. During the same period TVA repaid \$437 million to the U.S. Treasury, retained earnings of \$715 million from its power program, and incurred net expenses of \$494 million on its other programs. At June 30, 1971, the Government's proprietary capital in TVA was \$2,408 million.

A more detailed presentation of the above summary information is set forth in the following tabulation of the equity of the United States in TVA.

	<u>Power</u>	<u>Nonpower</u>	<u>Total</u>
	<u>----- (000 omitted) -----</u>		
Appropriations, property transfers, and bonds issued:			
Appropriations by the Congress	\$1,380,199	\$1,125,925	\$2,506,124
Property transfers from other agencies, net	21,077	31,867	52,944
Bonds issued to the U.S. Treasury and the Reconstruction Finance Corporation	<u>65,072</u>	<u>-</u>	<u>65,072</u>
Total	<u>\$1,466,348</u>	<u>\$1,157,792</u>	<u>\$2,624,140</u>
Less:			
Repayments to the general fund of the U.S. Treasury:			
Through June 30, 1947--under provisions of section 26 of the TVA Act	\$ 15,059	\$ 7,875	\$ 22,934
Through June 30, 1971--under provisions of section 26 of the TVA Act and title II of the Government Corporations Appropriations Act, 1948	170,000	33,677	203,677
Through June 30, 1971--under provisions of section 15d of the TVA Act	145,000	-	145,000
Bonds redeemed (\$56,500,000 under provisions of title II of the Government Corporations Appropriation Act, 1948)	<u>65,072</u>	<u>-</u>	<u>65,072</u>
Total	<u>\$ 395,131</u>	<u>\$ 41,552</u>	<u>\$ 436,683</u>
Net investment of U.S. Treasury funds	\$1,071,217	\$1,116,240	\$2,187,457
Retained earnings from power program	714,736	-	714,736
Net expense of nonpower programs	<u>-</u>	<u>-494,128</u>	<u>-494,128</u>
Total proprietary capital	<u>\$1,785,953^a</u>	<u>\$ 622,112</u>	<u>\$2,408,065^a</u>

^a Does not include short-term notes payable to the U.S. Treasury, which totaled \$100,000,000 at June 30, 1971.

Under section 15d of the TVA Act, as added by Public Law 86-137 on August 6, 1959, TVA is required to pay into the U.S. Treasury each year a part of the net appropriation investment in power facilities and a return on the outstanding investment. Beginning with fiscal year 1961, payments to the Treasury of the net appropriation investment are required as follows: \$10 million annually for the first 5 years, \$15 million annually for the next 5 years, and \$20 million annually thereafter until a total of \$1 billion has been repaid. Although the Board of Directors may defer the payments for 2 years, this option has not been exercised. TVA had paid \$145 million to the Treasury under this provision at June 30, 1971.

The required payment to the Treasury of an annual return on the net appropriation investment in power facilities is based on the average interest rate payable by the Treasury on its total marketable public obligations at the beginning of the fiscal year and on the unrepaid appropriation investment as of the same time. The 11 annual payments of the return on the appropriation investment that had been made as of June 30, 1971, amounted to \$513.3 million and included a payment of \$65.1 million in fiscal year 1971.

During fiscal year 1972 TVA will be required to pay into the Treasury from power proceeds \$20 million as a repayment of the appropriation investment and \$55.8 million as a return on the investment. Computation of the return was based on the unrepaid appropriation investment of \$1,071 million at July 1, 1971, and on the average Treasury interest rate of 5.210 percent at that date.

BORROWING AUTHORITY

TVA is authorized, under section 15d of the act, to issue and sell bonds, notes, and other evidence of indebtedness to assist in financing its power program. Prior to the enactment of Public Law 91-446 on October 14, 1970, the amount outstanding at any one time was not to exceed \$1.75 billion. Public Law 91-446 increased this limit to \$5 billion.

Section 15d states that the time of issuance and maximum interest rates to be borne by the obligations are subject to approval by the Secretary of the Treasury, who is authorized to purchase TVA interim obligations up to \$150 million outstanding at any one time. Debt service on these obligations is payable solely from TVA's net power proceeds and has precedence over repayments of the appropriation investment and payments of a return on investment to the U.S. Treasury. Bond sales, which began in 1960, totaled \$675 million as of June 30, 1971.

Under section 3.4 of the Basic Tennessee Valley Authority Power Bond Resolution, adopted October 6, 1960, TVA's net power income for the latest 5 fiscal years must have aggregated at least \$200 million before bonds on a parity with those outstanding might be issued. Moreover that minimum requirement is increased by \$15 million for each one quarter of 1 percent (or major fraction thereof) by which the average interest rate that TVA is required to use in calculating the annual return on the appropriation investment in power has exceeded 3-1/4 percent during those 5 years.

TVA failed to meet this requirement for the 5-year period ended June 30, 1970, and as a result issued only short-term securities during fiscal year 1971. Because TVA met the requirement for the 5-year period ended June 30, 1971, bonds on a parity with those outstanding can be issued during fiscal year 1972.

At June 30, 1971, TVA had short-term notes payable to the public outstanding of \$680.3 million, an increase of \$359.3 million over the amount outstanding at the beginning of the fiscal year. Short-term notes payable to the U.S. Treasury outstanding at June 30, 1971, amounted to

\$100 million, the same amount as was outstanding at June 30, 1970. As the obligations payable to the Treasury became due during the year, new obligations in like amounts were issued.

CONSTRUCTION PROGRAM

At June 30, 1971, TVA's gross investment in fixed assets was \$4,906 million, an increase of \$483 million over the investment at June 30, 1970. A summary of the differences in the fiscal year-end balances of the individual categories of fixed assets is shown below.

	Balance June 30, 1970	Balance June 30, 1971	Increases or de- creases(-)
	(000 omitted)		
Completed plant	\$3,848,512	\$3,954,636	\$106,124
Construction in progress	544,819	905,720	360,901
Investigations for future projects	4,738	4,261	-477
Nuclear fuel	<u>24,807</u>	<u>41,500</u>	<u>16,693</u>
	<u>\$4,422,876</u>	<u>\$4,906,117</u>	<u>\$483,241</u>

During fiscal year 1971, additions to construction work in progress amounted to \$489.8 million and transfers to completed plants amounted to \$128.9 million, which resulted in an increase of \$360.9 million in construction in progress.

Construction in progress during the year included the first unit of the Browns Ferry Nuclear Plant, TVA's first such plant, which originally was scheduled for operation in October 1970 but which now is not expected to be in service until the fall of 1972. Construction of the other two units of the plant also have been delayed. The Sequoyah and Watts Bar Nuclear Plants are scheduled for operation beginning in 1974 and 1976, respectively. Although the equipment for an additional nuclear plant has been ordered, the plant site has yet to be determined.

According to TVA, construction of the coal-fuel Cumberland Steam Plant is on schedule and the two units are expected to be in operation in the summer of 1972 and in the spring of 1973, respectively.

Construction of facilities to help meet peak power demands and emergency conditions continued during the year. In addition to continuing the expansion of transmission lines to facilitate increased power interchange and to effect peak load economies, TVA placed in operation 16 gas turbines at the Allen Steam Plant in June 1971 and is constructing 12 more units--four additional units at the Allen Steam Plant and eight at the Colbert Steam Plant--scheduled to be placed in operation during 1972. According to TVA gas turbines have relatively low capital costs but have high operating costs; however, they can be ordered and installed in a comparatively short period of time.

Also certain new hydro facilities are to be used mainly to meet peak power demands. TVA has scheduled the generating unit at Tims Ford Dam for operation in November 1971 and the first generating unit of the Raccoon Mountain Pumped-Storage Project for operation in 1974 and succeeding units in 1975. When the pumped-storage project is operational, water will be pumped from the Tennessee River into a mountaintop reservoir and electricity will be generated as the water is released.

CHAPTER 3

SCOPE OF EXAMINATION

Our examination of TVA's balance sheet as of June 30, 1971, and the related statements of power and nonpower programs and the source and disposition of funds for the year then ended was made in accordance with generally accepted auditing standards and included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

As provided by section 15d(c) of the TVA Act, TVA employs a firm of certified public accountants to audit its accounts and financial statements for each fiscal year, to facilitate its issuance and sale of revenue bonds. The audit does not take the place of that required of our Office. Our audit included observations and tests of the firm's audit work.

CHAPTER 4

OPINION ON FINANCIAL STATEMENTS

In our opinion, TVA's financial statements (exhibits I through IV and schs. A through F) present fairly its financial position at June 30, 1971, and the results of its operations and the source and disposition of its funds for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year and with applicable Federal laws.

The public accounting firm's opinion on the financial statements follows.

LYBRAND, ROSS BROS. & MONTGOMERY
CERTIFIED PUBLIC ACCOUNTANTS

COOPERS & LYBRAND
IN PRINCIPAL AREAS
OF THE WORLD

BEST DOCUMENT AVAILABLE

To the Board of Directors of
Tennessee Valley Authority:

We have examined the accompanying financial statements of TENNESSEE VALLEY AUTHORITY at June 30, 1971 and 1970 and for the years then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, Exhibits I, II, III and IV of the aforementioned financial statements present fairly:

- (1) the financial position of the Authority at June 30, 1971 and 1970, and the results of operations and source and disposition of funds of its several programs for the years then ended; and
- (2) the assets and liabilities of the Authority at June 30, 1971 and 1970, relating to the power program, and the results of operations and source and disposition of funds of that program for the years then ended,

all in conformity with generally accepted accounting principles applied on a consistent basis.

The supplemental information appearing in Schedules A to F, inclusive, which has been subjected to audit procedures applied in the examination of the basic financial statements, is, in our opinion, fairly stated in relation to the basic financial statements taken as a whole.

Lybrand, Ross Bros. & Montgomery

New York, August 27, 1971.

TENNESSEE VALLEY AUTHORITY

(A CORPORATION WHOLLY OWNED BY THE UNITED STATES OF AMERICA)

BALANCE SHEETS JUNE 30, 1971 AND 1970

A S S E T S

	Power program		All programs	
	1971	1970	1971	1970
	(Thousands)			
PROPERTY, PLANT, AND EQUIPMENT, substantially all at original cost				
Completed plant; schedule A				
Multipurpose dams; note 1	\$ 478,298	\$ 478,167	\$ 962,191	\$ 961,970
Single-purpose dams	63,688	62,891	63,688	62,891
Steam production plants	1,697,729	1,686,930	1,697,729	1,686,930
Other electric plant	1,078,137	974,870	1,078,137	974,870
Other plant	-	-	152,891	161,851
	<u>3,317,852</u>	<u>3,202,858</u>	<u>3,954,636</u>	<u>3,848,512</u>
Less accumulated depreciation and depletion; note 2	<u>997,916</u>	<u>924,447</u>	<u>1,117,576</u>	<u>1,044,610</u>
	<u>2,319,936</u>	<u>2,278,411</u>	<u>2,837,060</u>	<u>2,803,902</u>
Construction and investigations in progress; schedule B and note 3	822,362	481,918	909,981	549,557
Nuclear fuel in process of fabrication	<u>41,500</u>	<u>24,807</u>	<u>41,500</u>	<u>24,807</u>
Total property, plant, and equipment	<u>3,183,798</u>	<u>2,785,136</u>	<u>3,788,541</u>	<u>3,378,266</u>
CURRENT ASSETS				
Cash	20,769	42,384	43,982	64,210
U. S. Treasury bills, at cost (approximates market)	-	15,982	-	15,982
	<u>20,769</u>	<u>58,366</u>	<u>43,982</u>	<u>80,192</u>
Accounts receivable	54,536	45,853	62,643	50,562
Inventories, principally at average cost	<u>83,132</u>	<u>37,507</u>	<u>88,469</u>	<u>43,044</u>
Total current assets	<u>158,437</u>	<u>141,726</u>	<u>195,094</u>	<u>173,798</u>
DEFERRED CHARGES				
Unamortized debt discount and expense	9,428	7,078	9,428	7,078
Other	<u>762</u>	<u>-</u>	<u>762</u>	<u>-</u>
Total deferred charges	<u>10,190</u>	<u>7,078</u>	<u>10,190</u>	<u>7,078</u>
Total assets	<u>\$3,352,425</u>	<u>\$2,933,940</u>	<u>\$3,993,825</u>	<u>\$3,559,142</u>

Notes 1 through 8 following the exhibits are an integral part of the financial statements.

*Deduct

BEST DOCUMENT AVAILABLE

L I A B I L I T I E S

	Power program		All programs	
	1971	1970	1971	1970
	(Thousands)			
PROPRIETARY CAPITAL				
Appropriation investment; note 4				
Total congressional appropriations	\$1,380,199	\$1,377,545	\$2,506,124	\$2,449,944
Transfers of property from other Federal agencies	<u>21,077</u>	<u>20,829</u>	<u>52,944</u>	<u>52,438</u>
	1,401,276	1,398,374	2,559,068	2,502,382
Less repayments to General Fund of the U. S. Treasury; note 5	<u>330,059</u>	<u>310,059</u>	<u>371,611</u>	<u>351,601</u>
Appropriation investment	1,071,217	1,088,315	2,187,457	2,150,781
Retained earnings of power program; exhibit II	714,736	660,879	714,736	660,879
Accumulated net expense of nonpower programs; exhibit III	<u>-</u>	<u>-</u>	<u>494,128*</u>	<u>454,026*</u>
Total proprietary capital	<u>1,785,953</u>	<u>1,749,194</u>	<u>2,408,065</u>	<u>2,357,634</u>
LONG-TERM DEBT; note 6	<u>675,000</u>	<u>675,000</u>	<u>675,000</u>	<u>675,000</u>
SHORT-TERM NOTES; note 6	<u>780,300</u>	<u>421,000</u>	<u>780,300</u>	<u>421,000</u>
OTHER CURRENT LIABILITIES				
Accounts payable	88,730	68,268	97,747	76,251
Employees' accrued leave	9,714	7,641	18,680	15,370
Payrolls accrued	3,840	3,531	5,145	4,581
Interest accrued	<u>7,873</u>	<u>8,244</u>	<u>7,873</u>	<u>8,244</u>
Total other current liabilities	<u>110,157</u>	<u>87,684</u>	<u>129,445</u>	<u>104,446</u>
DEFERRED CREDITS				
Unamortized debt premium	<u>234</u>	<u>303</u>	<u>234</u>	<u>303</u>
CONTRIBUTIONS IN AID OF CONSTRUCTION	<u>781</u>	<u>759</u>	<u>781</u>	<u>759</u>
COMMITMENTS; note 3				
Total liabilities	<u>\$3,352,425</u>	<u>\$2,933,940</u>	<u>\$3,993,825</u>	<u>\$3,559,142</u>

EXHIBIT II

TENNESSEE VALLEY AUTHORITY
POWER PROGRAM
NET INCOME AND RETAINED EARNINGS
FOR THE YEARS ENDED JUNE 30, 1971 AND 1970

	1971		1970	
	kWh	Amount	kWh	Amount
	(Thousands)			
OPERATING REVENUES				
Sales of electric energy				
Municipalities and cooperatives	55,534,621	\$379,189	53,692,918	\$285,483
Federal agencies	11,773,513	61,840	13,069,614	59,426
Industries	21,278,275	125,014	22,012,611	105,995
Electric utilities	1,407,313	10,109	1,273,680	7,541
Total outside sales	89,993,722	576,152	90,048,823	458,445
Interdivisional	653,925	3,170	673,535	3,033
Total sales of electric energy	90,647,647	579,322	90,722,358	461,478
Rents		18,713		18,138
Total operating revenues		598,035		479,616
OPERATING EXPENSES; schedule C				
Production		306,111		246,071
Transmission		16,905		15,085
Customer accounts		426		335
Demonstration of power use		1,178		1,060
Administrative and general		22,013		18,043
Payments in lieu of taxes		19,961		16,098
Social security taxes		2,930		2,456
Provision for depreciation		80,002		75,067
Total operating expenses		449,526		374,215
Operating income		148,509		105,401
OTHER INCOME AND DEDUCTIONS				
Interest income		29		15
Allowance for funds used (construction and nuclear fuel)		48,131		31,552
Total other income and deductions		48,160		31,567
Income before interest charges		196,669		136,968
INTEREST CHARGES				
Interest on long-term debt		48,603		30,721
Other interest expense		29,003		31,559
Amortization of long-term debt discount, premium, and expense, net		59		71
Total interest charges		77,665		62,351
Net income		119,004		74,617
Payment of return on appropriation investment; note 5		65,147		57,649
Increase in retained earnings		53,857		16,968
Retained earnings at beginning of period		660,879		643,911
Retained earnings at end of period		\$714,736		\$660,879

Notes 1 through 8 following the exhibits are an integral part of the financial statements.

EXHIBIT III

Page 1

TENNESSEE VALLEY AUTHORITY
NONPOWER PROGRAMS
NET EXPENSE AND ACCUMULATED NET EXPENSE
FOR THE YEARS ENDED JUNE 30, 1971 AND 1970

	<u>1971</u>	<u>1970</u>
	(Thousands)	
WATER RESOURCES DEVELOPMENT		
Navigation operations		
Studies and investigations	\$ 907	\$ 878
Operation and maintenance of facilities	2,248	2,116
Provision for depreciation	<u>2,753</u>	<u>2,751</u>
Total expense of navigation operations	<u>5,908</u>	<u>5,745</u>
Flood control operations		
Studies and investigations	749	699
Operation and maintenance of facilities	2,476	2,198
Local flood control improvements	482	906
Provision for depreciation	<u>1,267</u>	<u>1,264</u>
Total expense of flood control operations	<u>4,974</u>	<u>5,067</u>
Regional water quality management	1,496	1,389
Fish and wildlife development	433	306
Preliminary surveys and engineering	1,159	785
Recreation projects	<u>698</u>	<u>645</u>
Total expense of water resources development	<u>14,668</u>	<u>13,937</u>
FERTILIZER AND MUNITIONS DEVELOPMENT		
Developmental production		
Cost of products distributed, including depreciation and depletion of \$1,847,000 in 1971, \$1,843,000 in 1970	<u>22,872</u>	<u>22,912</u>
General expenses		
Loss on retirements of manufacturing plant and equipment	1,250	677
Loss on disposal of spare parts from inventory	371	49
Loss on disposal of Florida phosphate reserves	870	-
Other general expenses	<u>876</u>	<u>877</u>
Total general expenses	<u>3,367</u>	<u>1,603</u>
Total production expense	<u>26,239</u>	<u>24,515</u>
Less transfers and sales of products		
Transfers to TVA programs, at market prices		
Fertilizer industry demonstrations	15,410	14,877
Farm test demonstrations	334	423
Agricultural projects	299	453
Other	<u>58</u>	<u>38</u>
	16,101	15,791
Direct sales	<u>654</u>	<u>1,433</u>
Total transfers and sales	<u>16,755</u>	<u>17,224</u>
Net expense of developmental production	<u>9,484</u>	<u>7,291</u>
Fertilizer introduction		
Fertilizer industry demonstrations		
Fertilizers used	15,410	14,877
Educational distribution expense	<u>1,217</u>	<u>1,147</u>
	16,627	16,024
Less industry payments for fertilizer	<u>14,801</u>	<u>14,206</u>
	<u>1,826</u>	<u>1,818</u>

TENNESSEE VALLEY AUTHORITY
NONPOWER PROGRAMS
NET EXPENSE AND ACCUMULATED NET EXPENSE
FOR THE YEARS ENDED JUNE 30, 1971 AND 1970

	1971	1970
	(Thousands)	
FERTILIZER AND MUNITIONS DEVELOPMENT - continued		
Fertilizer introduction - continued		
Farm test demonstrations outside the Valley		
Fertilizers used	\$ 334	\$ 423
Planning and supervision	492	509
	826	932
Less farmer payments for fertilizer	225	253
	601	679
Net expense of fertilizer introduction	2,427	2,497
Research and development	4,972	4,674
Net expense of fertilizer and munitions development	16,883	14,462
GENERAL RESOURCES DEVELOPMENT		
Agricultural projects		
Fertilizers used	299	453
Planning and supervision	912	817
	1,211	1,270
Less farmer payments for fertilizer	180	251
	1,031	1,019
Development investigations and general expenses	414	327
Net expense of agricultural projects	1,445	1,346
Forestry projects	1,008	995
Tributary area development	1,514	1,362
Regional development planning	522	896
Townlift community improvement	373	-
Demonstrations in education and manpower development	1,027	730
Minerals projects	224	168
Environmental quality projects	252	215
Net expense of general resources development	6,365	5,712
LAND BETWEEN THE LAKES OPERATIONS	1,699	1,449
ENVIRONMENTAL RESEARCH AND DEVELOPMENT	156	-
VALLEY MAPPING	308	405
OTHER EXPENSE, NET	23	41
Net expense; schedule D	40,102	36,006
Accumulated net expense at beginning of period	454,026	418,020
Accumulated net expense at end of period	\$494,128	\$454,026

Notes 1 through 8 following the exhibits are an integral part of the financial statements.

EXHIBIT IV

Page 1

TENNESSEE VALLEY AUTHORITY
SOURCE AND DISPOSITION OF FUNDS
FOR THE YEARS ENDED JUNE 30, 1971 AND 1970

	Power program		All programs	
	1971	1970	1971	1970
	(Thousands)			
SOURCE				
Net power income; exhibit II	\$ 119,004	\$ 74,617	\$ 119,004	\$ 74,617
Add items not requiring funds; note a	<u>31,969</u>	<u>43,588</u>	<u>31,969</u>	<u>43,588</u>
Funds from power operations	150,973	118,205	150,973	118,205
Sale of power facilities	<u>610</u>	<u>474</u>	<u>610</u>	<u>474</u>
Funds from power program; note b	151,583	118,679	151,583	118,679
Net expense of nonpower programs; exhibit III			40,102*	36,006*
Add items not requiring funds; note a			<u>8,633</u>	<u>7,150</u>
Funds used in nonpower operations			31,469*	28,856*
Sale of nonpower facilities			<u>2,140</u>	<u>737</u>
Funds used in nonpower programs			29,329*	28,119*
Sale of long-term bonds	-	299,241	-	299,241
Issues of short-term notes	1,740,000	1,170,000	1,740,000	1,170,000
Congressional appropriations	2,654	1,308	56,180	50,600
Property transfers	248	157	506	1,941
Contributions in aid of construction	<u>22</u>	<u>10</u>	<u>22</u>	<u>10</u>
Total source	<u>\$1,894,507</u>	<u>\$1,589,395</u>	<u>\$1,918,962</u>	<u>\$1,612,352</u>
DISPOSITION				
Expended for plant and equipment, excluding allowance for funds used	\$ 433,344	\$ 311,382	\$ 458,012	\$ 337,809
Less salvage from plant transfers, and depreciation charged to construction and clearing accounts	<u>2,175</u>	<u>3,164</u>	<u>4,457</u>	<u>5,643</u>
	431,169	308,218	453,555	332,166
Payments to U. S. Treasury; note 5				
Return on appropriation investment	65,147	57,649	65,147	57,649
Repayment of appropriation investment	<u>20,000</u>	<u>15,000</u>	<u>20,010</u>	<u>15,008</u>
	85,147	72,649	85,157	72,657
Redemption of short-term notes	<u>1,380,700</u>	<u>1,201,655</u>	<u>1,380,700</u>	<u>1,201,655</u>
Deferred charges, net	<u>3,253</u>	<u>793*</u>	<u>3,253</u>	<u>793*</u>
Changes in working capital				
Cash	37,597*	35,091	36,210*	35,264
Accounts receivable	8,683	9,334	12,081	9,267
Inventories	45,625	6,707*	45,425	7,497*
Other current liabilities	<u>22,473*</u>	<u>30,052*</u>	<u>24,999*</u>	<u>30,367*</u>
Increase or decrease#	<u>5,762*#</u>	<u>7,666</u>	<u>3,703*#</u>	<u>6,667</u>
Total disposition	<u>\$1,894,507</u>	<u>\$1,589,395</u>	<u>\$1,918,962</u>	<u>\$1,612,352</u>

TENNESSEE VALLEY AUTHORITY
SOURCE AND DISPOSITION OF FUNDS
FOR THE YEARS ENDED JUNE 30, 1971 AND 1970

NOTES:

a. Items not requiring funds:

	<u>Power</u>		<u>Nonpower</u>	
	<u>1971</u>	<u>1970</u>	<u>1971</u>	<u>1970</u>
	(Thousands)			
Provisions for depreciation	\$80,002	\$75,067	\$6,497	\$6,457
Provisions for depletion	19	2	16	16
Loss on retirements and disposals of property, plant, and equipment	7	-	2,120	677
Amortization of deferred charges and credits, net	72	71	-	-
Allowance for funds used (construction and nuclear fuel)	<u>48,131*</u>	<u>31,552*</u>	<u>-</u>	<u>-</u>
	<u>\$31,969</u>	<u>\$43,588</u>	<u>\$8,633</u>	<u>\$7,150</u>

b. Net power proceeds (see note 6) may be derived as follows:

	<u>Year ended June 30</u>	
	<u>1971</u>	<u>1970</u>
	(Thousands)	
Funds from power program	\$151,583	\$118,679
Add back interest charges	<u>77,606</u>	<u>62,280</u>
Net power proceeds	<u>\$229,189</u>	<u>\$180,959</u>

Notes 1 through 8 following the exhibits are an integral part of the financial statements.

*Deduct

TENNESSEE VALLEY AUTHORITY
NOTES TO FINANCIAL STATEMENTS

1. Allocation of cost of multipurpose projects--Section 14 of the TVA Act requires TVA's Board of Directors to allocate the cost of completed multipurpose projects, subject to the approval of the President of the United States. The cost of facilities installed exclusively for a single purpose is assigned directly to that purpose; the cost of multiple-use facilities is allocated among the various purposes served.

The total investment of \$962,191,000 in completed multipurpose dams at June 30, 1971, is classified as follows:

	Investment		
	Direct	Multiple-use	Total
	(Thousands)		
Power	\$302,776	\$175,522	\$478,298
Navigation	150,538	137,339	287,877
Flood control	59,668	128,541	188,209
Tributary area development	19	7,788	7,807
Total	<u>\$513,001</u>	<u>\$449,190</u>	<u>\$962,191</u>

2. Depreciation and depletion policy--Straight-line depreciation is provided for substantially on a composite basis. Rates of depreciation are derived from engineering studies of useful life and are reviewed each year. Depletion of coal land and land rights and phosphate land and mineral rights is provided on a unit of production basis.

3. Estimates of cost to complete major construction projects, and commitments--The cost to complete the major power projects (including nuclear fuel) under construction or authorized for construction at June 30, 1971, is estimated to be \$3,130,100,000, including commitments of \$1,309,087,000 for materials and services contracted for and not delivered. The corresponding estimate for multipurpose and nonpower projects is \$294,290,000, including commitments of \$2,430,000. Additional contractual commitments of \$1,907,000 for multipurpose and nonpower projects had been entered into at June 30, 1971, on which TVA's obligation is limited by the availability of funds from congressional appropriations for succeeding fiscal periods.

TVA and the City of Memphis, Tennessee, have entered into agreements under which (1) TVA sells to the City all the power and energy requirements of its electric distribution system, and (2) the City leases to TVA the Thomas H. Allen steam-electric generating plant with an installed capacity of 990,000 kilowatts; each agreement is for a term of 20 years, beginning January 1, 1965. The lease agreement provides for annual rental payments of \$6,900,000 and grants TVA an option to buy the plant for \$2,000,000 at the end of the lease term.

TENNESSEE VALLEY AUTHORITY

NOTES -- CONTINUED

4. Appropriation investment--Changes in appropriation investment during the years ended June 30, 1971 and 1970, were as follows:

	<u>Power program</u>		<u>All programs</u>	
	<u>1971</u>	<u>1970</u>	<u>1971</u>	<u>1970</u>
	(Thousands)			
Congressional appropriations	\$ 2,654	\$ 1,308	\$ 56,180	\$ 50,600
Transfers of property from other Federal agencies	<u>248</u>	<u>157</u>	<u>506</u>	<u>1,941</u>
	2,902	1,465	56,686	52,541
Less repayments to General Fund of the U. S. Treasury	<u>20,000</u>	<u>15,000</u>	<u>20,010</u>	<u>15,008</u>
Increase or decrease* for the period	17,098*	13,535*	36,676	37,533
Balance, beginning of period	<u>1,088,315</u>	<u>1,101,850</u>	<u>2,150,781</u>	<u>2,113,248</u>
Balance, end of period	<u>\$1,071,217</u>	<u>\$1,088,315</u>	<u>\$2,187,457</u>	<u>\$2,150,781</u>

A request for an additional appropriation of \$56,600,000 as of July 1, 1971, is pending action in the Congress.

5. Payments to the U. S. Treasury--Section 15d of the TVA Act requires the payment from net power proceeds of a return on the net appropriation investment in power facilities plus repayments of such investment, beginning with fiscal year 1961. The amount of return payable during each year is based on the appropriation investment as of the beginning of that year and the computed average interest rate payable by the U. S. Treasury on its total marketable public obligations as of the same date. The repayment schedule calls for payment of not less than \$10 million for each of the first five years (1961-1965), \$15 million for each of the next five years (1966-1970), and \$20 million for each year thereafter until a total of \$1 billion shall have been repaid. The payments required by Section 15d may be deferred under certain circumstances for not more than two years.

Required payments have been made as follows:

	<u>Return</u>	<u>Repayment</u>	<u>Total</u>
	(Thousands)		
Total to June 30, 1970	\$448,246	\$125,000	\$573,246
Year ended June 30, 1971	<u>65,147</u>	<u>20,000</u>	<u>85,147</u>
	<u>\$513,393</u>	<u>\$145,000</u>	<u>\$658,393</u>

For 1972 the required payments will be \$55,810,000 as a return on the appropriation investment at the computed average interest rate of 5.210 percent and \$20,000,000 as a repayment, a total of \$75,810,000.

TENNESSEE VALLEY AUTHORITY

NOTES — CONTINUED

In addition to the payments from net power proceeds, \$10,000 of nonpower proceeds was paid to the U. S. Treasury in 1971 under the provisions of Section 26 of the TVA Act. This brought the total payments from nonpower proceeds to \$41,552,000.

Prior to 1961, under then existing legislation, TVA paid to the Treasury \$185,059,000 of power proceeds. In addition, \$65,072,000 of bonds sold to the Treasury and Reconstruction Finance Corporation in fiscal years 1939-1941 have been fully repaid from power proceeds. Section 26 of the TVA Act provides for annual payments to the Treasury of any power or nonpower proceeds not needed for the operation of dams and reservoirs, the conduct of the power program, and the manufacture and distribution of fertilizers.

6. Borrowing authority--Section 15d of the TVA Act authorizes TVA to issue bonds, notes, and other evidences of indebtedness up to a total of \$5 billion outstanding at any one time to assist in financing its power program. Debt service on these obligations, which is payable solely from TVA's net power proceeds, has precedence over the payments to the U. S. Treasury described in note 5. Issues outstanding on June 30, 1971, consist of the following:

	(Thousands)
Long-term debt	
4.40% 1960 Series A, due November 15, 1985	\$ 50,000
4-5/8% 1961 Series A, due July 1, 1986	50,000
4-1/2% 1962 Series A, due February 1, 1987	45,000
5.70% 1967 Series A, due May 15, 1992	70,000
6-3/8% 1967 Series B, due November 1, 1992	60,000
8% 1969 Series A, due June 1, 1974	100,000
8-1/4% 1969 Series B, due October 15, 1994	100,000
9% 1970 Series A, due March 15, 1995	100,000
9-1/4% 1970 Series B, due June 15, 1995	50,000
8-3/4% 1970 Series C, due June 15, 1975	<u>50,000</u>
Total long-term debt	<u>675,000</u>
Short-term notes	
Payable to U. S. Treasury	100,000
Payable to public	<u>680,300</u>
Total short-term notes	<u>780,300</u>
	<u>\$1,455,300</u>

7. Retirement plan--TVA has a contributory retirement plan which covers substantially all of its salaried employees. The cost of currently accruing benefits is funded currently, and the unfunded prior service cost is being amortized and funded over a period of 35 years from July 1, 1970. The cost of the plan to TVA for the years ended June 30, 1971 and 1970, was \$15,256,000 and \$12,355,000, respectively.

8. Reclassification--The June 30, 1970, financial statements have been reclassified to conform with the current presentation.

TENNESSEE VALLEY AUTHORITY

COMPLETED PLANT

JUNE 30, 1971

		Depreciation and depletion	
		Provision	Accumulated
		year ended	balance
	Assets	June 30, 1971	June 30, 1971
Power			
Multipurpose dams; Note A	\$ 429,452,244	\$ 5,847,317	\$ 145,632,737
Multipurpose dams; Note B	48,845,357	735,642	4,272,418
Single-purpose dams	63,687,707	826,347	23,917,653
Steam production plants	1,697,729,365	47,159,568	546,901,780
Other electric plant	1,078,137,515	25,500,942	277,191,150
Total power	3,317,852,188	80,069,816	997,915,738
Navigation			
Multipurpose dams; Note A	227,644,345	2,206,518	44,048,200
Multipurpose dams; Note B	60,231,985	546,712	2,627,875
Total navigation	287,876,330	2,753,230	46,676,075
Flood control			
Multipurpose dams; Note A	180,808,704	1,200,435	32,956,339
Multipurpose dams; Note B	7,400,527	53,284	238,505
Bristol flood control plant	2,066,082	13,573	79,063
Total flood control	190,275,313	1,267,292	33,273,907
Tributary area development			
Multipurpose dams Note B	7,807,309	49,983	201,192
Recreation and conservation education			
Land between the lakes	45,647,666	315,280	1,271,958
Other	478,260	10,374	19,508
Total recreation and conservation education	46,125,926	325,654	1,291,466
Chemical	56,955,109	2,069,375	19,656,215
General	47,744,228	2,831,651	18,561,448
Total	\$3,954,636,403	\$89,367,001	\$1,117,576,041
Total completed plant			
Multipurpose dams	\$ 962,190,471	\$10,639,891	\$ 229,977,266
Single-purpose dams	63,687,707	826,347	23,917,653
Steam production plants	1,697,729,365	47,159,568	546,901,780
Other electric plant	1,078,137,515	25,500,942	277,191,150
Other plant	152,891,345	5,240,253	39,588,192
Total	\$3,954,636,403	\$89,367,001	\$1,117,576,041

GAO Notes:

A - System Allocation

B - Project Allocations

SCHEDULE B

TENNESSEE VALLEY AUTHORITY CONSTRUCTION AND INVESTIGATIONS IN PROGRESS JUNE 30, 1971

	Power program	All programs
Construction in progress		
Generating facilities		
Browns Ferry Nuclear Plant	\$366,491,412	\$366,491,412
Sequoyah Nuclear Plant	85,319,814	85,319,814
Watts Bar Nuclear Plant	2,316,987	2,316,987
Additional nuclear capacity	560,429	560,429
Cumberland Steam Plant	257,700,313	257,700,313
Colbert gas turbine units 1-8	6,152,389	6,152,389
Allen gas turbine units 1-16	3,598,866	3,598,866
Allen gas turbine units 17-20	5,618,422	5,618,422
Raccoon Mountain pumped storage project	20,490,208	20,490,208
Total generating facilities	<u>748,248,840</u>	<u>748,248,840</u>
Transmission lines, substations, and other additions to power facilities	<u>61,324,778</u>	<u>61,324,778</u>
Navigation facilities		<u>230,717</u>
Flood control facilities		<u>613,225</u>
Multipurpose facilities		
Tellico Dam and Reservoir	-	27,061,350
Tims Ford Dam and Reservoir	10,641,144	46,227,326
Columbia Dam and Reservoir	-	594,138
Normandy Dam and Reservoir	-	630,979
Upper French Broad water control system	-	1,455,342
Bear Creek water control system	-	3,317,942
Other	154,822	655,595
Total multipurpose facilities	<u>10,795,966</u>	<u>79,942,672</u>
Chemical plant		<u>9,929,018</u>
Recreation and conservation education facilities		
Land between the lakes		1,839,144
Other		<u>261,183</u>
Total recreation and conservation education facilities		<u>2,100,327</u>
General plant		
General construction equipment and materials	-	2,245,740
Other additions to general plant	95,913	1,083,991
Total general plant	<u>95,913</u>	<u>3,329,731</u>
Total construction in progress	<u>820,465,497</u>	<u>905,719,308</u>
Investigations for future projects		
Power facilities	1,896,317	1,896,317
Navigation facilities	-	117,903
Flood control facilities	-	1,130,593
Multipurpose facilities	-	1,116,330
Total investigations for future projects	<u>1,896,317</u>	<u>4,261,143</u>
Total construction and investigations in progress	<u>\$822,361,814</u>	<u>\$909,980,451</u>

TENNESSEE VALLEY AUTHORITY
DETAILS OF POWER EXPENSE
FOR THE YEAR ENDED JUNE 30, 1971

SUMMARY	Total	Provision for depreciation	Total before depreciation (exhibit II)	Operation	Maintenance	Other
Production						
Multipurpose dams						
Direct	\$ 10,738,575	\$ 5,351,570	\$ 5,387,005	\$ 3,139,176	\$ 2,247,829	\$ -
Multiple-use; schedule E	4,080,305	1,231,389	2,848,916	2,495,911	353,005	-
Single-purpose dams	2,482,925	826,347	1,656,578	810,782	845,796	-
Cumberland Basin projects; note a	8,645,327	-	8,645,327	-	-	8,645,327
Steam plants	308,150,176	47,159,568	260,990,608	223,872,054	37,118,554	-
Gas turbine plants	273,282	64,111	209,171	206,559	2,612	-
Total generation	334,370,590	54,632,985	279,737,605	230,524,482	40,567,796	8,645,327
Purchased power	2,758,212	-	2,758,212	-	-	2,758,212
Interchange power received	24,375,465	-	24,375,465	-	-	24,375,465
Interchange power delivered	9,291,074*	-	9,291,074*	-	-	9,291,074*
System control and load dispatching	1,263,391	-	1,263,391	-	-	1,263,391
Other	7,267,889	-	7,267,889	-	-	7,267,889
Total production	360,744,473	54,632,985	306,111,488	230,524,482	40,567,796	35,019,210
Transmission	40,613,188	23,708,200	16,904,988	9,781,416	7,123,572	-
Customer accounts	426,000	-	426,000	426,000	-	-
Demonstration of power use	1,177,868	-	1,177,868	1,177,868	-	-
Payments in lieu of taxes; note b	19,960,863	-	19,960,863	-	-	19,960,863
Social security taxes	2,930,003	-	2,930,003	-	-	2,930,003
Administrative and general						
Direct	23,534,122	1,660,339	21,873,783	21,870,463	3,320	-
Multiple-use	136,499	-	136,499	136,499	-	-
Total operating expense	\$449,523,016	\$80,001,524	\$369,521,492	\$263,916,728	\$47,694,688	\$57,910,076

SYSTEM STATISTICS	kWh generated less station use (thousands)	Production expense including depreciation		Installed capacity at June 30, 1971 (kilowatts)	Ratio of average gross generation to installed capacity (percent)
		Total	Per kWh (mills)		
Generation					
Multipurpose dams					
Direct	11,568,939	\$ 10,738,575	.928	2,892,730	45.88
Multiple-use; schedule E	-	4,080,305	.353	-	-
Total multipurpose dams	11,568,939	14,818,880	1.281	2,892,730	45.88
Single-purpose dams	1,164,672	2,482,925	2.132	250,200	53.32
Cumberland Basin projects; note a	2,737,102	8,645,327	3.159	753,000	41.81
Alcoa dams; note c	1,811,696	-	-	423,715	48.93
Total hydro generation	17,282,409	-	-	4,319,645	45.90
Steam plants	74,332,137	308,150,176	4.146	15,126,335	59.29
Gas turbine plants	18,315	273,282	14.921	382,400	1.26
Total generation; note d	91,632,861	-	-	19,828,380	56.24
Purchased power	593,235	2,758,212	-	-	-
Interchange power received	8,889,542	24,375,465	-	-	-
System control and load dispatching	-	1,263,391	-	-	-
Other	-	7,267,889	-	-	-
Total system input	101,115,638	-	-	-	-
Delivered under Alcoa agreement	1,846,665*	-	-	-	-
Interchange power delivered	5,049,415*	9,291,074*	-	-	-
Net energy supply	94,219,558	360,744,473	3.829	-	-
Shop and internal uses	5,316*	-	-	-	-
Transmission and transformation losses	3,566,594*	-	-	-	-
Total kWh sales and production expense	90,647,648	\$360,744,473	3.980	-	-

Notes:

- TVA purchases substantially all of the output of seven hydro plants in the Cumberland River Basin. In accordance with memorandums of understanding with the Corps of Engineers, Department of the Army, the Cumberland Basin projects are operated for optimum production of power in conjunction with TVA's power system, subject to flood control, navigation, and other operating requirements of the Army.
- Payments made to states and counties in which power operations are carried out. The basic amount is 5 percent of gross revenues from the sale of power to other than Federal agencies during the preceding year, with the provision of minimum payments under certain circumstances.
- Operation of twelve hydro plants of the Aluminum Company of America is coordinated with the operation of TVA's power plants under an arrangement whereby the storage and release of water from the Alcoa plants are carried out by the company under TVA's direction.
- Installed capacity increased 405,900 kilowatts during fiscal year 1971. Additions consisted of 382,400 kilowatts in sixteen gas turbine units at the Allen Steam Plant and 23,500 kilowatts from modifications to three generators.

*Deduct

SCHEDULE D

Page 1

TENNESSEE VALLEY AUTHORITY DETAILS OF NONPOWER NET EXPENSE FOR THE YEAR ENDED JUNE 30, 1971

	Direct	Multiple-use (schedule E)	Total
WATER RESOURCES DEVELOPMENT			
Navigation operations			
Studies and investigations			
Navigation engineering and investigations	\$ 845,782	\$ -	\$ 845,782
Administrative and general expenses; schedule F	60,780	-	60,780
	<u>906,562</u>	<u>-</u>	<u>906,562</u>
Operation and maintenance of facilities			
Operation	16,529	1,871,933	1,888,462
Maintenance	21,843	235,489	257,332
Administrative and general expenses	-	102,375	102,375
	<u>38,372</u>	<u>2,209,797</u>	<u>2,248,169</u>
Provision for depreciation	<u>1,811,486</u>	<u>941,744</u>	<u>2,753,230</u>
Total expense of navigation operations	<u>\$2,756,420</u>	<u>\$3,151,541</u>	<u>5,907,961</u>
Flood control operations			
Studies and investigations			
System studies and investigations	\$ 298,120	\$ -	298,120
Local flood studies and cooperation with other agencies	418,531	-	418,531
Administrative and general expenses; schedule F	31,989	-	31,989
	<u>748,640</u>	<u>-</u>	<u>748,640</u>
Operation and maintenance of facilities			
Operation	140,528	1,960,567	2,101,095
Maintenance	-	268,148	268,148
Administrative and general expenses	-	107,159	107,159
	<u>140,528</u>	<u>2,335,874</u>	<u>2,476,402</u>
Local flood control improvements	<u>481,782</u>	<u>-</u>	<u>481,782</u>
Provision for depreciation	<u>361,622</u>	<u>905,670</u>	<u>1,267,292</u>
Total expense of flood control operations	<u>\$1,732,572</u>	<u>\$3,241,544</u>	<u>4,974,116</u>
Regional water quality management			
Regional water quality management			1,423,339
Provision for depreciation			11,641
Administrative and general expenses; schedule F			60,780
Total expense of regional water quality management			<u>1,495,760</u>
Fish and wildlife development			
Fish and wildlife development			407,077
Provision for depreciation			9,030
Administrative and general expenses; schedule F			17,061
Total expense of fish and wildlife development			<u>433,168</u>
Preliminary surveys and engineering			
Preliminary surveys and engineering			1,134,894
Administrative and general expenses; schedule F			24,525
Total expense of preliminary surveys and engineering			<u>1,159,419</u>
Recreation projects			
Recreation resources development			661,828
Provision for depreciation			10,374
Administrative and general expenses; schedule F			25,591
Total expense of recreation projects			<u>697,793</u>
Total expense of water resources development			<u>\$14,668,217</u>

TENNESSEE VALLEY AUTHORITY
DETAILS OF NONPOWER NET EXPENSE
FOR THE YEAR ENDED JUNE 30, 1971

FERTILIZER AND MUNITIONS DEVELOPMENT

Developmental production		
Cost of products distributed; note a		
Materials used		\$ 5,226,900
Direct manufacturing and shipping expense		13,319,354
Indirect manufacturing and shipping expense		2,757,149
Provisions for depreciation and depletion		1,847,075
Recoveries from byproducts and in-process materials		306,224*
In-process inventory changes		25,140*
Finished inventory changes		52,497
Total cost of products distributed		<u>22,871,611</u>
General expenses		
Loss on retirements of manufacturing plant and equipment		1,249,987
Loss on disposal of spare parts from inventory		371,468
Loss on disposal of Florida phosphate reserves		870,106
Other general expenses		
Administrative and general; schedule F	\$ 513,487	
Shipping order expense	179,242	
Provision for depreciation of idle manufacturing plant and equipment	134,110	
Other	48,991	
Total general expenses		<u>875,830</u>
Total production expense		<u>3,367,391</u>
Less transfers and sales of products		<u>26,239,002</u>
Transfers to TVA programs, at market prices		
Fertilizer industry demonstrations		15,410,038
Farm test demonstrations		334,106
Agricultural projects		298,922
Other		58,397
Total transfers		<u>16,101,463</u>
Direct sales		653,710
Total transfers and sales		<u>16,755,173</u>
Net expense of developmental production		<u>9,483,829</u>
Fertilizer introduction		
Fertilizer industry demonstrations		
Fertilizers used		15,410,038
Educational distribution expense	1,148,610	
Administrative and general expenses; schedule F	68,322	
		<u>1,216,932</u>
		<u>16,626,970</u>
Less industry payments for fertilizer; note b		<u>14,801,038</u>
		<u>1,825,932</u>
Farm test demonstrations outside the Valley		
Fertilizers used		334,106
Planning and supervision	461,466	
Administrative and general expenses; schedule F	30,958	
		<u>492,424</u>
		<u>826,530</u>
Less farmer payments for fertilizer		<u>225,384</u>
		<u>601,146</u>
Net expense of fertilizer introduction		<u>2,427,078</u>
Research and development		
Research and development of products and processes		
Applied research		810,643
Process engineering		1,131,919
General expenses		696,853
		<u>2,639,415</u>
*Deduct		

SCHEDULE D

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TENNESSEE VALLEY AUTHORITY

DETAILS OF NONPOWER NET EXPENSE FOR THE YEAR ENDED JUNE 30, 1971

FERTILIZER AND MUNITIONS DEVELOPMENT - continued

Research and development - continued	
Research and development of processes for recovery of sulfur	\$ 176,040
Basic chemical and agronomic research	1,841,391
Provision for depreciation	84,711
Administrative and general expenses; schedule F	<u>230,589</u>
Total expense of research and development	<u>4,972,146</u>
Net expense of fertilizer and munitions development	<u>\$16,883,053</u>

GENERAL RESOURCES DEVELOPMENT

Agricultural projects	
Fertilizers used	
In specific tributary areas	\$ 98,205
Outside specific tributary areas	<u>200,717</u>
Planning and supervision	
In specific tributary areas	232,716
Outside specific tributary areas	<u>679,562</u>
	<u>912,278</u>
Less farmer payments for fertilizer	
In specific tributary areas	56,194
Outside specific tributary areas	<u>123,470</u>
	<u>179,664</u>
	<u>1,031,536</u>
Agribusiness development	75,215
Preliminary investigations in tributary watersheds	55,093
Program planning and analysis	89,717
Research on forage fertilization and utilization	61,145
Alleviation of rural poverty	15,269
Tenure and land use adjustment	29,993
Tennessee Valley rural life conferences	28,003
Provision for depreciation	3,479
Administrative and general expenses; schedule F	<u>55,512</u>
Net expense of agricultural projects	<u>413,426</u>
	<u>1,444,962</u>
Forestry projects	
Use of Valley forests	460,813
Development of Valley forests	432,752
Forest ecology and influences	61,130
Provision for depreciation	13,443
Administrative and general expenses: schedule F	<u>39,454</u>
Total expense of forestry projects	<u>1,007,592</u>
Tributary area development	
Basic investigations	193,729
Development assistance in specific tributary areas	1,050,951
Provision for depreciation	195
Multiple-use operating expenses; schedule E	158,305
Administrative and general expenses; schedule F	<u>111,031</u>
Total expense of tributary area development	<u>1,514,211</u>
Regional development planning	
Regional development planning	474,588
Administrative and general expenses; schedule F	<u>47,945</u>
Total expense of regional development planning	<u>522,533</u>
Townlift community improvement	
Townlift community improvement	364,067
Administrative and general expenses; schedule F	<u>8,530</u>
Total expense of townlift community improvement	<u>372,597</u>
Demonstrations in education and manpower development	
Demonstrations in education and manpower development	984,119
Administrative and general expenses; schedule F	<u>42,653</u>
Total expense of demonstrations in education and manpower development	<u>1,026,772</u>

TENNESSEE VALLEY AUTHORITY
DETAILS OF NONPOWER NET EXPENSE
FOR THE YEAR ENDED JUNE 30, 1971

GENERAL RESOURCES DEVELOPMENT - continued

Minerals projects	
Mineral resources investigations	\$ 216,770
Administrative and general expenses; schedule F	<u>7,465</u>
Total expense of minerals projects	<u>224,235</u>
Environmental quality projects	
Regional air quality management	109,706
Strip mine reclamation	88,186
Research on disposal of solid wastes	33,085
Administrative and general expenses; schedule F	<u>21,326</u>
Total expense of environmental quality projects	<u>252,303</u>
Net expense of general resources development	<u>\$ 6,365,205</u>

LAND BETWEEN THE LAKES OPERATIONS

Land between the lakes operations	\$ 1,340,544
Provision for depreciation	315,280
Administrative and general expenses; schedule F	<u>42,653</u>
Total expense of land between the lakes operations	<u>\$ 1,698,477</u>

ENVIRONMENTAL RESEARCH AND DEVELOPMENT

Environmental research and development	\$ 147,426
Administrative and general expenses; schedule F	<u>8,530</u>
Total expense of environmental research and development	<u>\$ 155,956</u>

VALLEY MAPPING

Valley mapping	\$ 281,473
Provision for depreciation	12,585
Administrative and general expenses; schedule F	<u>13,836</u>
Total expense of valley mapping	<u>\$ 307,894</u>

OTHER EXPENSE OR INCOME*

Emergency preparedness	\$ 13,445
Maintenance of bridges financed by others on TVA dams	47,674
Interest income from receivables	<u>37,717*</u>
Other expense, net	<u>\$ 23,402</u>
Net expense	<u>\$40,102,204</u>

Notes:

- a. In the discharge of its obligations under Section 5 of the TVA Act, TVA operates plants for the manufacture of products for agricultural and military purposes; conducts research and pilot plant development of new or improved processes for the production of new or existing fertilizers and munitions; and tests the fertilizers produced and demonstrates their effectiveness. Production is carried out on an experimental basis, and costs are consequently affected by the developmental nature of the manufacturing operations.

Research on products and processes is not scaled to TVA's production operations. Its scope is determined by opportunities to render service in the public interest; findings are made available to the public through technical publications, answers to correspondence, and discussions with technical visitors to the laboratories and plants. For these reasons, the cost of such research is accounted for under a separate program rather than as a part of production operations.

- b. Sales of fertilizer materials are not on a commercial basis, but are made to organizations collaborating in an educational program aimed at improving the manufacture, distribution, and use of fertilizers.

SCHEDULE E

Operation

Water dispatching	\$ 1,227,048
Water control investigations	142,607
Investigations and control of reservoir ecology	1,211,094
Plant protection and services to visitors	1,359,283
Operation and upkeep of dam reservations	1,038,444
Reservoir land management	1,213,726
Other expense	<u>224,843</u>
Total operation	6,417,045
Administrative and general expenses; schedule F	350,817
Maintenance	871,741
Provision for depreciation	<u>3,128,591</u>
Total	<u><u>\$10,768,194</u></u>

	Distributed to				Total
	Power operations	Navigation operations	Flood control operations	Tributary area development	
Operation	\$2,495,911	\$1,871,933	\$1,960,567	\$ 88,634	\$ 6,417,045
Administrative and general	136,499	102,375	107,159	4,784	350,817
Maintenance	353,005	235,489	268,148	15,099	871,741
Depreciation	<u>1,231,389</u>	<u>941,744</u>	<u>905,670</u>	<u>49,788</u>	<u>3,128,591</u>
Total	<u><u>\$4,216,804</u></u>	<u><u>\$3,151,541</u></u>	<u><u>\$3,241,544</u></u>	<u><u>\$158,305</u></u>	<u><u>\$10,768,194</u></u>

SCHEDULE F

TENNESSEE VALLEY AUTHORITY ADMINISTRATIVE AND GENERAL EXPENSES FOR THE YEAR ENDED JUNE 30, 1971

Expenses	
Board of directors	\$ 248,315
Office of the general manager	261,357
Budget staff	291,830
Washington office	91,724
Information office, including technical library service	842,655
Equal employment opportunity staff	229,911
Division of personnel	2,232,283
Division of finance	2,790,853
Division of law	963,657
Division of property and supply	1,536,012
Medical and safety services	1,249,318
Other administrative and general	130,919
Total	<u>\$10,868,834</u>

	Amount	Percent of total
Distributed to		
Construction	\$ 4,809,101	44.25
Recovered through services billed to others at cost	194,968	1.79
Expense of programs		
Power	4,050,931	37.27
Water resources development		
Navigation	60,780	.56
Flood control	31,989	.29
Regional water quality management	60,780	.56
Fish and wildlife development	17,061	.16
Preliminary surveys and engineering	24,525	.23
Recreation projects	25,591	.24
Multiple-use operations	350,817	3.23
Fertilizer and munitions development		
Developmental production	513,487	4.72
Fertilizer industry demonstrations	68,322	.63
Farm test demonstrations	30,958	.28
Research and development	230,589	2.12
General resources development		
Agricultural projects	55,512	.51
Forestry projects	39,454	.36
Tributary area development	111,031	1.02
Regional development planning	47,945	.44
Townlift community improvement	8,530	.08
Demonstrations in education and manpower development	42,653	.39
Minerals projects	7,465	.07
Environmental quality projects	21,326	.20
Land between the lakes operations	42,653	.39
Environmental research and development	8,530	.08
Valley mapping	13,836	.13
Total	<u>\$10,868,834</u>	<u>100.00</u>

RETIREMENT SYSTEM OF THE TENNESSEE VALLEY AUTHORITY

The TVA retirement system was established in 1939 to provide a program of retirement, disability, and death benefits financed jointly by contributions of TVA and of its salaried employees. Administration of the system is vested in its own Board of Directors, three are appointed by TVA, three are elected by the participants, and the seventh is chosen by these six directors.

The operation of the retirement system is regarded as a Federal function in general and as a TVA function in particular. As authorized in section 301(b) of the Government Corporation Control Act (31 U.S.C. 866(b)) the General Accounting Office contracted with a firm of certified public accountants to make the audit of the system. Following are the balance sheet of the system at June 30, 1971, and the related statements of change in fund balances for the year then ended with respect to the Fixed Benefit, the Variable Annuity, the Supplement to Medicare Premium Reserve, and the Voluntary Retirement Savings and Investment Plan Funds, together with the auditors' opinion.

LYBRAND, ROSS BROS. & MONTGOMERY
CERTIFIED PUBLIC ACCOUNTANTS

COOPERS & LYBRAND
IN PRINCIPAL AREAS
OF THE WORLD

To the Comptroller General of the United States,
Washington, D. C.:

We have examined the balance sheet of the RETIREMENT SYSTEM of the TENNESSEE VALLEY AUTHORITY as of June 30, 1971 and the related statement of changes in fund balances for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included confirmations from the trustees and custodians of cash and investments held as of June 30, 1971 and such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the aforementioned financial statements present fairly the financial position of the Retirement System of the Tennessee Valley Authority at June 30, 1971, and the changes in fund balances for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Lybrand, Ross Bros. & Montgomery

New York, September 30, 1971.

RETIREMENT SYSTEM of the TENNESSEE VALLEY AUTHORITY
BALANCE SHEET, June 30, 1971

ASSETS:

Investments:

Securities:

Bonds and notes (details annexed):

At amortized cost (current redemption values or market quotations,
\$69,710,411)

At market (cost, \$6,625,850)

Real estate mortgages (details annexed)

Preferred stocks (details annexed):

At cost (market quotations, \$1,584,875)

Common stocks (details annexed):

At cost (market quotations, \$206,188,224)

At market (cost, \$42,290,261)

United States Government obligations, at cost (approximates market)

Fund shares:

164,469 shares, at market, \$24.94 per share (cost, \$4,449,711)

78,551 shares, at market, \$10.54 per share (cost, \$819,586)

At market (cost, \$570,607) (details annexed)

Properties acquired under buy and leaseback agreements, at cost,
less amortization of \$596,653

Real property:

Land, at cost

Buildings, at cost, less allowance for depreciation of \$194,175

Cash:

Treasurer's fund

Trustee

Receivables:

Contributions

Dividends, accrued interest, etc.

LIABILITIES and FUNDS:

Payables:

Securities purchased

Other

Fund balances (statement annexed)

Fixed Benefit Fund	Variable Annuity Fund	Voluntary Retirement Savings and Investment Plan			Supplement to Medicare - Premium Reserve Fund
		Fidelity Trend Fund	Puritan Fund	Unit Fund	
\$ 87,506,616	\$ 6,371,500				
3,053,429					
2,198,483					
139,843,481					
<u>232,602,009</u>	<u>48,892,763</u>				
2,290,910	55,264,263				\$58,226
		\$4,101,857			
			\$827,930		
				\$696,049	
<u>234,892,919</u>	<u>55,264,263</u>	<u>4,101,857</u>	<u>827,930</u>	<u>696,049</u>	<u>58,226</u>
1,858,193					
627,000					
<u>875,575</u>					
238,253,687	55,264,263	4,101,857	827,930	696,049	58,226
2,043	4,840	97	106	8,972	
513,264	329,352				4,568
1,291,016	64,388	3	2		
<u>1,363,557</u>	<u>144,149</u>			<u>718</u>	<u>781</u>
<u>\$241,423,567</u>	<u>\$55,806,992</u>	<u>\$4,101,957</u>	<u>\$828,038</u>	<u>\$705,739</u>	<u>\$63,575</u>
	\$ 1,386,459			\$ 9,023	
\$ 151,408		\$ 100	\$ 100		
<u>241,272,159</u>	<u>54,420,533</u>	<u>4,101,857</u>	<u>827,938</u>	<u>696,716</u>	<u>\$63,575</u>
<u>\$241,423,567</u>	<u>\$55,806,992</u>	<u>\$4,101,957</u>	<u>\$828,038</u>	<u>\$705,739</u>	<u>\$63,575</u>

APPENDIX I

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RETIREMENT SYSTEM of the TENNESSEE VALLEY AUTHORITY

INVESTMENTS in SECURITIES

June 30, 1971

FIXED BENEFIT FUND (at cost or amortized cost):

Bonds and notes:

Principal amount:

Utility	\$26,305,000
Industrial	25,984,186
Financial	15,325,195
Foreign	11,136,000
Railroad	3,206,618

Unamortized (discounts) and
premiums, net

(2,122,828)

79,834,171

Temporary investments

7,672,445 \$ 87,506,616

Real estate mortgages:

Veterans Administration	477,516
Federal Housing Administration	519,154
Commingled	1,550,035
Other	<u>506,724</u>

3,053,429

Preferred stocks:

Industrial	2,198,483
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Common stocks:

Industrial	96,110,773
Utility	20,046,623
Commingled	16,900,840
Other	<u>6,785,245</u>

139,843,481

\$232,602,009

VARIABLE ANNUITY FUND (at market):

Bonds and notes:

Industrial	3,836,500
Financial	<u>2,535,000</u>

\$ 6,371,500

Common stocks:

Industrial	39,274,363
Utility	7,453,075
Insurance	<u>2,165,325</u>

48,892,763

\$ 55,264,263

Continued

RETIREMENT SYSTEM of the TENNESSEE VALLEY AUTHORITY
INVESTMENTS in SECURITIES, Continued
June 30, 1971

VOLUNTARY SAVINGS and INVESTMENT PLAN:

Unit fund (at market):

PRO Fund, Inc.:

15,275 shares, \$10.79 per share
(cost, \$142,623) \$164,817

Rowe Price New Horizon Fund, Inc.:

6,121 shares, \$29.96 per share
(cost, \$143,590) 183,376

T. Rowe Price Growth Stock Fund, Inc.:

6,362 shares, \$27.88 per share
(cost, \$142,786) 177,379

Smith, Barney Equity Fund Incorporated:

16,098 shares, \$10.59 per share
(cost, \$141,608) 170,477

\$696,049

RETIREMENT SYSTEM of the TENNESSEE VALLEY AUTHORITY
STATEMENT of CHANGES in FUND BALANCES
for the year ended June 30, 1971

	Fixed Benefit Fund	
	Total	Annuity Savings Account
Contributions:		
Members	\$ 3,360,434	\$ 3,360,434
Tennessee Valley Authority	15,259,624	
Investment income:		
Interest	4,864,006	
Dividends	4,024,129	
Rents (less depreciation and amortization of \$95,814)	169,316	
Net realized gains (losses) on sales of investments	(2,686,930)	
Capital gains distribution		
Net unrealized appreciation of investments		
	24,990,579	3,360,434
Transfers:		
Interest		1,651,910
Accumulations	(727,145)	(3,615,043)
	<u>\$ 24,263,434</u>	<u>\$ 1,397,301</u>
Administrative expenses	\$ 577,899	
Withdrawals	291,677	\$ 273,777
Death benefits	957,500	160,585
Retirement benefits	7,218,684	
Premiums paid		
	<u>\$ 9,045,760</u>	<u>\$ 434,362</u>
Net increase (decrease)	\$ 15,217,674	\$ 962,939
Balances, June 30, 1970	<u>226,054,485</u>	<u>41,991,772</u>
Balances, June 30, 1971	<u>\$241,272,159</u>	<u>\$42,954,711</u>

Fixed Benefit Fund		Voluntary Retirement Savings and Investment Plan				Supplement to Medicare Premium Reserve Fund
Pension Accumulation Account	Investment Reserve Account	Variable Annuity Fund	Fidelity Trend Fund	Puritan Fund	Unit Fund	
\$ 15,259,624		\$ 4,719,359	\$ 823,947	\$209,320	\$297,063	
4,864,006		200,050				\$ 3,798
4,024,129		714,304	94,628	33,909	5,011	
169,316						
(2,478,462)	(\$ 208,468)	866,686				
		13,589,138	1,068,017	155,098	3,324	
21,838,613	(208,468)	20,089,537	1,986,592	398,327	125,442	3,798
(1,935,078)	283,168					
2,887,898		727,145	(287,572)	(2,570)	290,142	
<u>\$ 22,791,433</u>	<u>\$ 74,700</u>	<u>\$20,816,682</u>	<u>\$1,699,020</u>	<u>\$395,757</u>	<u>\$720,982</u>	<u>\$ 3,798</u>
\$ 577,899						
17,900		\$ 272,579	\$ 284,230	\$ 80,877	\$ 24,266	
796,915						
7,218,684		395,772				
						12,753
<u>\$ 8,611,398</u>		<u>\$ 668,351</u>	<u>\$ 284,230</u>	<u>\$ 80,877</u>	<u>\$ 24,266</u>	<u>\$12,753</u>
\$ 14,180,035	\$ 74,700	\$20,148,331	\$1,414,790	\$314,880	\$696,716	(\$ 8,955)
176,842,766	7,219,947	34,272,202	2,687,067	513,058		72,530
<u>\$191,022,801</u>	<u>\$7,294,647</u>	<u>\$54,420,533</u>	<u>\$4,101,857</u>	<u>\$827,938</u>	<u>\$696,716</u>	<u>\$63,575</u>

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